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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,886	08/30/2001	Zhao Wu	016491-004000US	2075
20350	7590	09/20/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			HAN, CLEMENCE S	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/943,886	Applicant(s) WU ET AL.	
	Examiner Clemence Han	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 18-27 is/are rejected.
- 7) ☒ Claim(s) 12-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/29/2002</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4, 5, 8, 20, 21 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example, it is not clear whether the processor in claim 4 should handle all available proprietary concatenation formats or just some of the formats.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1-11 and 18-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Heuer (US 6,842,455).

Regarding to claim 1, Heuer teaches a system for multiplexing data onto a SONET/SDH frame, comprising: a calendar 52 configured to selectively direct

input data received from a plurality of channels (Column 6 Line 21-28); a processor 56 configured to receive the input data and process the input data using virtual concatenation or contiguous concatenation or a combination of both (Column 6 Line 31-36); and a terminator 57 configured to terminate overhead data within the SONET/SDH frame (Column 6 Line 39-41).

Regarding to claim 2, Heuer teaches handling arbitrary virtual concatenation with STS-1 or STS-3c granularity (Column 1 Line 25-27).

Regarding to claim 3, Heuer teaches handling contiguous concatenation with STS-Nc capacity, where N is a multiple of 3 (Column 1 Line 39).

Regarding to claim 4, Heuer teaches handling non-standard virtual concatenation and any proprietary concatenation format (Column 3 Line 8).

Regarding to claim 5, Heuer teaches handling mixed concatenation of any contiguous concatenation traffic and virtual concatenation traffic with STS-3c granularity (Column 3 Line 8 shows SDH case, see Column 1 Line 20-27 for SONET/SDH difference).

Regarding to claim 6, Heuer teaches implemented in a programmable logic device 50.

Regarding to claim 7, Heuer teaches receive and process the overhead data (Column 6 Line 27-28); and the system further comprising: a shifter 55 configured

to redistribute the overhead data and the input data received from the plurality of channels before the overhead data and the input data are selectively directed by the calendar to the processor (Column 6 Line 27-38).

Regarding to claim 8, Heuer teaches handle any mixed concatenation including STS-I-XV (Column 3 Line 8 shows SDH case, see Column 1 Line 20-27 for SONET/SDH difference).

Regarding to claim 9, Heuer teaches the overhead data terminated by the terminator 57 include H1, H2 and H3 bytes in line overhead and H4 byte in path overhead (SONET/SDH standard, see also Column 1 Line 61).

Regarding to claim 10, Heuer teaches a multi-frame indicator and a sequence number are inserted into the H4 byte in the path overhead (Column 6 Line 36-38).

Regarding to claim 11, Heuer teaches a system for multiplexing input data from a plurality of channels onto a selected one of a plurality of SONET/SDH frames having different sizes, comprising: a calendar 52 configured to selectively multiplex the input data received from the plurality of channels (Column 6 Line 21-28); a processor 56 configured to receive the multiplexed input data and rearrange the multiplexed input data onto the selected SONET/SDH frame using virtual concatenation or contiguous concatenation or a combination of both

(Column 6 Line 31-36); and a terminator 57 configured to terminate overhead bytes within the selected SONET/SDH frame (Column 6 Line 39-41).

Regarding to claim 18, Heuer teaches handling arbitrary virtual concatenation with STS-1 or STS-3c granularity (Column 1 Line 25-27).

Regarding to claim 19, Heuer teaches handling contiguous concatenation with STS-Nc capacity, where N is a multiple of 3 (Column 1 Line 39).

Regarding to claim 20, Heuer teaches handling non-standard virtual concatenation and any proprietary concatenation format (Column 3 Line 8).

Regarding to claim 21, Heuer teaches handling mixed concatenation of any contiguous concatenation traffic and virtual concatenation traffic with STS-3c granularity (Column 3 Line 8 shows SDH case, see Column 1 Line 20-27 for SONET/SDH difference).

Regarding to claim 22, Heuer teaches implemented in a programmable logic device 50.

Regarding to claim 23, Heuer teaches receive and process the overhead data (Column 6 Line 27-28); and the system further comprising: a shifter 55 configured to redistribute the overhead data and the input data received from the plurality of channels before the overhead data and the input data are selectively directed by the calendar to the processor (Column 6 Line 27-38).

Regarding to claim 24, Heuer teaches handle any mixed concatenation including STS-I-XV (Column 3 Line 8 shows SDH case, see Column 1 Line 20-27 for SONET/SDH difference).

Regarding to claim 25, Heuer teaches the overhead data terminated by the terminator 57 include H1, H2 and H3 bytes in line overhead and H4 byte in path overhead (SONET/SDH standard, see also Column 1 Line 61).

Regarding to claim 26, Heuer teaches a multi-frame indicator and a sequence number are inserted into the H4 byte in the path overhead (Column 6 Line 36-38).

Regarding to claim 27, Heuer teaches the different sizes of the plurality of SONET/SDH frames include STS-12, STS-48, STS-192 and STS-768 (Column 2 Line 3-4).

***Allowable Subject Matter***

5. Claim 12-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to the invention in general.

U.S. Patent 5,257,261 to Parruck et al.

U.S. Patent 5,923,653 to Denton

U.S. Patent 6,014,708 to Klish

U.S. Patent 6,765,933 to Michel

U.S. Patent 6,917,630 to Russell et al.

U.S. Pub. 2002/0012141 to Traverso

U.S. Pub. 2002/0001308 to Heuer

U.S. Pub. 2003/0007513 to Barker et al.

WO 200131820 A2 to Klausmeier et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clemence Han whose telephone number is (571) 272-3158. The examiner can normally be reached on Monday-Thursday 7 -

5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone



number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. H.  
Clemence Han  
Examiner  
Art Unit 2665

  
STEVEN NGUYEN  
PRIMARY EXAMINER